1. (5 pts) Consider the B+ tree below.

Note that this tree does not show data nodes, and you do not need to see the data nodes to answer this question. At each leaf, N* is an index of the form <N, <page id, slot #>>, where N is the value of the search key.

Show the tree that results from inserting records with search key 98 followed by 96 (do not use redistribution).
2. (5 pts) Consider the extendible hash table to the left. Assume $\text{Hash}(x) = x$. Show the result of inserting the following keys in order: 24, 59
1. (5 pts) Consider the B+ tree below. **AFTER ADDING 98, and before adding 96**
ANSWER for Question 1 (5 pts)

-2 if 96 and/or 98 does not appear at leaf

-2 for any tree that isn’t 4 levels. Use discretion on partial credit.
2. (5 pts) Consider the extendible hash table to the left. Assume Hash(x) = x. Show the result of inserting the following keys in order: 24, 59

-1 for each misplaced key (order within a bin not important), and -1 for wrong local or global depth; grader – just need check that bins contain the correct content; don’t get hung up on checking pointers – mistakes there would probably be typos anyways